N.E. Page 23, line 6, delete"500";

N.E. line 6, after "call" insert --(step 500 in Figure 10)--;

N.E. line 10, delete "501";

N.E. line 11, after "message" insert --(step 501)--, and delete "502";

N.E. line 12 after "poll" insert --(step 502)--;

N.E. line 21, after "sends" insert a comma --,--; and

N.E. line 22, after "name" insert a comma --,--.

IN THE CLAIMS:

Please cancel claims 26-28 without prejudice or disclaimer.

Amend claim 21, as follows:

21. (Amended) [A] In a two way network communication system, a method of administering transfers of information [credit administration] between first and second [computer] communication nodes, [for information amounts having predetermined information credit values] based on credit administration, comprising [the steps of]:

[sending] issuing a credit [to] for a first [computer] node, which [sets a response frequency] enables a transfer of a set amount of information from said first node,

receiving at a second node an [information] amount of information corresponding

in value up to the [amount of the] credit [received at] issued for said first [computer] node [at said response frequency]; and

sending a [done signal] message to said second [computer] node indicative of [the credit received less] the amount of information [received] remaining to be sent.

Add new claims 29 to 54, as follows:

29. The method as recited in claim 21 further including providing a shared channel over which said first and second nodes transfer information.

30. The method as recited in claim 21 wherein, in said issuing step, said credit is issued to enable said first node to transfer information to said second node over a selected one of a dedicated channel and shared channel.

31. The method as recited in claim 30 (preceding claim) wherein, in said sending step, said first node periodically reports to said second node a status of remaining amounts of information to be transferred.

32. The method as recited in claim 21 further including multiple first nodes, polling said

multiple first nodes from said second node to determine which of said first nodes requests an information transfer, and bypassing polling of respective ones of said first nodes that have unused information transfer credits.

33. The method as recited in claim 21 further including returning said information transfer credit to said second node when said first node has no information to transfer.

34. The method as recited in claim 21 further including providing multiple first nodes capable of transferring information to said second node, and issuing a credit for dedicated channel use by said first node that has been waiting the longest to transfer information.

35. The method as recited in claim 21 further including issuing a credit signal indicative of one of a rate, frequency and channel to be used by said first node to transfer information to said second node.

36. In a network communication system including a server that transfers information with a plurality of remote devices via respective upstream and downstream channels,

the improvement comprising:

a network controller that issues respective credit control packets associated with said remote devices corresponding to a volume of data said remote devices are respectively authorized to send, said credit signals being updated upon transfers of information to indicate respective authorized volumes of data less respective transferred volumes of data.

37. The system as recited in claim 36 wherein said network controller monitors respective statuses of said remote devices and transitions respective ones of said remote devices to a non-responsive state when said controller does not receive responses to said credit control packets.

38. The system as recited in claim 36 wherein said network controller couples the physical layer of each of said upstream and downstream channels.

39. The system as recited in claim 38 wherein said downstream channel comprises a shared medium that is shared by said remote devices, and said upstream and downstream channels form an asymmetric network connection between said host and said remote devices.

40. The system as recited in claim 39 wherein said downstream channel is selected from one of a CATV network, a direct broadcast satellite network, and an over-the-air radio frequency transmission, and said upstream channel is selected from one of a CATV network and an over-the-air radio frequency transmission.

41. In an asymmetric communication system providing a two way interactive network session between a host and a remote device over respective upstream and downstream communication channels, the improvement comprising:

a network manager coupled at least at the network layer of said communication channels to issue information transfer credits indicative of an authorized volume of data to be transferred by said remote device wherein, upon a transfer of information by said remote device, a done message is sent to said network manager indicative of a volume of data remaining to be transferred by said remote device.

42. A two-way network communication system including a server, a plurality of remote clients and an information distribution facility for distributing data packets to said remote clients, said communication system comprising:

a downstream channel that is shared by said plurality of remote clients to receive high speed data packets from said server,

at least one upstream channel for enabling at least one of said remote clients to convey lower speed return data packets to said server, and

a network manager for managing transfers of data packets from said server to said remote clients in accordance with a downstream channel protocol and transfers of return data packets from said remote clients to said server in accordance with an upstream channel protocol, and for issuing credit control packets indicative of respective volumes of data said remote clients are respectively authorized to send, said remote clients respectively returning updated messages to said network manager indicative of respective remaining volumes of data to be sent to said server.

43. The network communication system as recited in claim 42 wherein said upstream channel and said downstream channel reside in different communication media.

44. The network communication system as recited in claim 42 wherein said downstream channel lies in a hybrid fiber coaxial cable network and said remote clients physically connect in parallel to said hybrid fiber coaxial cable network to receive simultaneously broadcast data packets whereby to facilitate efficient sharing of resources at said distribution facility by said remote clients.

45. The network communication system as recited in claim 44 wherein said upstream channel comprises a lower speed channel carried by said hybrid fiber coaxial cable network.

46. The network communication system as recited in claim 42 wherein said distribution facility comprises a cellular broadcast facility, said shared medium comprises radio frequency broadcasts from said cellular broadcast facility, and said remote clients each comprise radio frequency receivers for receiving data packets transmitted over said shared medium.

47. The network communication system as recited in claim 42 wherein said upstream channel comprises a lower speed cellular return channel routed through said distribution facility.

48. The network communication system as recited in claim 42 wherein said distribution facility comprises a direct broadcast satellite, said shared medium comprises electromagnetic transmissions from said direct satellite broadcast and said remote clients includes a receiver for receiving information signals from said broadcast.

49. The network communication system as recited in claim 42 wherein each of said upstream and downstream channels lies in a communication medium selected from one of a CATV distribution network, a cell site, an electromagnetic transmission, a hybrid fiber coaxial cable network, an over-the-air wireless network, and a direct broadcast satellite communication network.

50. The network communication system as recited in claim 42 wherein said upstream channel protocol enables operation of said upstream channel at multiple speeds on multiple upstream channels and said network manager selectably assigns an upstream channel having a speed according to an information transfer requirement of a remote client so as to provide more effective utilization of channel bandwidth according to demand by respective remote clients.

~~51. In an asymmetric network communication system including a host server, a~~ plurality of remote clients and a headend facility for distributing information signals to said remote clients, a packet delivery system comprising:

a downstream channel that is shared by said plurality of remote clients for ~~receiving high speed data packets from said host server over a shared medium,~~

an upstream channel shared by said remote clients that enables at least one of said remote clients to transmit lower speed return data packets to said host server,

a hybrid access system including a network manager for controlling transfers of data packets from said host server to said remote clients over said shared medium in accordance with a downstream channel protocol and for controlling transfers of lower return data packets from a remote client to said host server over said shared upstream channel in accordance with an upstream channel protocol,

said hybrid access system including a backbone interface that enables connection with said host server, a downstream router for enabling transmission of high speed data packets to said remote clients over said shared medium and an upstream router for receiving return data packets from said at least one of said remote clients, and

said hybrid access system further including a credit manager for issuing credit control packets indicative of respective volumes of data said remote clients are respectively authorized to send, wherein said remote clients respectively return updated messages to said network manager indicative of respective remaining volumes of data to be sent to said host server.

52. In combination with a television broadcast facility including a shared medium

downstream channel that is shared by a plurality of network devices that receive high speed data packets from a host server, the improvement comprising:

respective interfaces associated with said remote devices that are connected with said shared medium and tuned so as to receive high speed transfers of data packets for conveyance to said remote clients,

an upstream channel that is shared by said client devices to enable conveyance of lower speed return data packets to said host server,

a network manager for controlling transfers of information data packets from said host server to said remote clients over said shared medium in accordance with a downstream channel protocol and transfers of return data packets from said remote clients to said host server over said upstream channel in accordance with an upstream channel protocol,

wherein said network manager issues credit control packets indicative of a volume of data which at least one of said network devices is authorized to send wherein said at least of said network devices effects updates said credit control packet to indicate an authorized volume of data less a volume of data sent by said at least one of said network devices.

53. In an asymmetric wide area network that includes a network manager, a host

~~server and a plurality of remote clients, a method of communicating with remote clients~~ including the steps of:

providing an upstream channel that shared by said remote clients and that enables at least one of said remote clients to transmit return data packets to said host server,

transmitting a credit signal to a remote client to authorize a volume of data said remote client is authorized to send,

effecting updating of said credit signal so that the credit signal corresponds to said authorized volume of data less data sent by said remote client, and

returning said updated credit signal to said network manager.

54. A wireless packet delivery system for use in a communication network that establishes a communications link between a host server and at least one remote device, said system comprising:

a downstream channel that is shared by said at least one remote device for receiving data packets from said host server over a shared over a shared medium,

at least one upstream channel that enables said at least one remote device to transmit return data to said host server,

~~a network manager for handling transfers of data packets between said host~~